

## DATA PATH FOR HIGH PERFORMANCE PATTERN GENERATOR

### CROSS REFERENCE TO RELATED CASES AND PRIORITY INFORMATION

[0001] This application is a continuation of co-pending U.S. Patent Application Serial No. 10/049,286, <sup>now U.S. Patent No. 6,717,097,</sup> filed February 11, 2002, and claims domestic priority benefits under 35 U.S.C. §120 to Application Serial No. 10/049,286. U.S. Patent Application Serial No. 10/049,286 is the national phase under 35 U.S.C. § 371 of PCT of International Application No. PCT/SE00/01749, filed September 8, 2000, designating the United States of America and published in English. U.S. Patent Application Serial No. 10/049,286 has claimed priority under 35 U.S.C. §119(a)-(d) to Swedish Patent Application 9903243-5, filed September 9, 1999 in the Swedish Patent Office, the entire contents of which are hereby incorporated by reference.

### BACKGROUND OF THE INVENTION

#### Field of the Invention.

[0002] The present invention relates to high-end pattern generation, such as for the patterning of photomasks, microelectronic and microoptical devices and for production of display devices. Other applications of highly precise patterns such as security printing and interconnection devices are also related to the invention.

[0003] The term pattern generator is used in the description to mean a machine that creates a physical pattern from data, typically by the action of light on a photosensitive surface.

#### Description of Related Art

[0004] Patterning of photomasks for the production of integrated circuits is developing according to the so-called More's law, where every three years a new circuit generation with four times the complexity of the previous one is created. Thirty-five years ago the patterns were manually cut with knife in a red plastic film, so called Rubylith film. Later, the need for increasingly precise and complex

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